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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/627,471	07/25/2003	Xianping Wang	5861	3224

7590 04/10/2006
David L. Hedden
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P.O. Box 2219
Columbus, OH 43216

EXAMINER

SANDERS, KRIELLION ANTIONETTE

ART UNIT	PAPER NUMBER
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1714

DATE MAILED: 04/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/627,471

Applicant(s)

WANG ET AL.

Examiner

Kriellion A. Sanders

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1714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-12 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The addition of the compounds, “ammonium hydrogen fluoride” and “potassium hydrogen fluoride” into the specification at page 8 and into the claims constitutes new matter. These terms were not part of the original disclosure. Deletion of the new matter from the specification and claims is required.

Claim Rejections - 35 USC § 103

Claims 1-12 were previously rejected under 35 USC § 103 over Woodson, US Patent No. 4806576.

Response to Arguments

2. Applicant's arguments filed 1/27/2006 have been fully considered and have been found to be persuasive to overcome the rejection over Woodson. However applicant has raised several points of argument that require a response. Applicant argues that Woodson must include an ethylenically unsaturated monomer or polymer in his binder. This is not true. The ethylenically unsaturated monomer is an optional component of the Woodson compositions. The reference would suggest the omission of a reactive ethylenically unsaturated monomer if so desired. See col. 6, lines 36-43.

3. Contrary to applicant's statement at the last paragraph of page 10 of the remarks filed 1/27/06, the present claims have not been limited to aqueous solutions of fluorinated acids.

The rejection under 35 USC § 103 over Woodson, US Patent No. 4806576 is withdrawn.

New Prior Art

1. The newly referenced patent to Chen et al. is cited as providing technological background information. Chen et al discloses that hydrogenfluorides of aminosilanols are particularly useful in foundry binders, most particularly no-bake and cold-box phenolic urethane foundry binders. The hydrogenfluorides of aminosilanols are formed by the reaction of an aqueous solution of a fluorinated acid, preferably, hydrofluoric acid, with an aminoalkoxysilane. The phenolic urethane cold-box binders containing the hydrogenfluorides of aminosilanols are said to have excellent humidity resistance. The hydrogenfluorides of aminosilanols are the reaction products

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formed by the reaction of an aqueous solution of a fluorinated acid, either hydrofluoric acid or a fluorinated acid, which hydrolyzes to yield hydrofluoric acid, with an aminoalkoxysilane.

Preferably, the fluorinated acid is hydrofluoric acid, most preferably an aqueous solution of hydrofluoric acid, containing from 10 to 90 weight percent water, preferably 30-60 weight percent water. Other fluorinated acids that can be used are ammoniumfluoride, ammoniumbifluoride, potassiumbifluoride, tetrafluoroboric acid, hexafluorophosphoric acid, hexafluorosilicic acid, N,N-diisopropylaminetris(hydrogenfluoride), and N,N'-dimethyl-2-imidazolidone-hexakis(hydrogenfluoride).

Allowable Subject Matter

The following is a statement of reasons for the indication of allowable subject matter over the art of record:

2. Because Chen et al teaches the use of the reaction product of an aqueous solution of a fluorinated acid, preferably, hydrofluoric acid, with an aminoalkoxysilane, it would not have been obvious to one of ordinary skill in the art at the time of applicant's invention to use the fluorinated acids of Chen et al in a non-reacted state as applicant claims. The aminoalkoxysilane reactant of the Chen et al disclosure (col. 7, line 5) is a compound that is so chemically diverse from the silane coupling agents of applicant's disclosure (page 7, line 24) that the ordinary practitioner of this art would not reasonably expect the combined use of applicant's fluorinated acid and aminoalkoxysilane to result in a product that is structurally similar to the hydrofluoric acid, / aminoalkoxysilane reaction product of Chen et al.

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kriellion A. Sanders whose telephone number is 571-272-1122. The examiner can normally be reached on Monday through Thursday 6:30-7:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Kriellion A. Sanders
Primary Examiner
Art Unit 1714

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